Approved for use through 10/31/2002. OMB 0651-0031 U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Action of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control

number. Substitute for Form 1449A/PTO Complete if Known **Application Number** Filing Date INFORMATION DISCLOSURE ecember 30, 2003 **First Named Inventor** STATEMENT BY APPLICANT Art Unit (Use as many sheets as necessary.) **Examiner Name** David H zahn

Attorney Docket Number

U.S. PATENT DOCUMENTS

of

JUN 1 7 2009

Sheet

	U.S. PATENT DOCUMENTS										
Exam. Initials	Cite No.1	Document Number Number-Kind Code	Publication Date  MM-DD-YYYY	Name of Patententee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant						
	AA	(if known) US-6,816,961	11/9/2004	Rice et al.	Figures Appear						
	AB	US-2003/0131030	7/10/2003		<del>-</del>						
		1		Sebot et al.							
	AC	US-6,745,319	6/1/2004	Balmer et al.							
	AD	US- 2005/0188182	8/25/2005	Hoyle et al.							
	AE	US-2002/0002666	1/3/2002	Dulong et al.							
	AF	US-2003/0123748	7/3/2003	Sebot et al.							
	AG	US-2001/0016902	8/23/2001	Abdallah et al.							
	AH	US-6,211,892	4/3/2001	Huff et al.							
	Al	US-6,115,812	9/5/2000	Abdallah et al.							
	AJ	US-2003/0231711	12/18/2003	Zhang et al.							
	AK	US-2002/0172287	11/21/2002	King							
	AL	US-2002/0159529	10/31/2002	Wang et al.							
	AM	US-	,								
	AN	US-									
	AO	US-									
	AP	US-									
	AQ	US-	ļ								
	AR	US-									
	AS	US-									
	AT	US-									

#### **FOREIGN PATENT DOCUMENTS**

Exam. Initials	Cite No.1	Foreign Patent Document Country Code <sup>3</sup> -Number <sup>4</sup> -KindCode <sup>5</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T°
	AU					1 "
	AV			"		
	AW					
	AX					
	AY		.,.			
	AZ					
	BA					
	BB					
	BC					
	BD					
	BE _					

Examiner	Date
Signature	Considered

<sup>\*</sup>Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

Applicant's unique citation designation number (optional). 2See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. 5Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 6Applicant is to place a check mark here if English language Translation is attached. Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for Form 1449A/PTO (Modified) (use as many sheets as newstary)			Attorney Docket No.:	Application Number: 10/ 749, 738						
Page	•		First Named Inventor: Eric Debes	Examiner: Malzahn, David H						
Confirma	ation l	No.	Filing Date: December 30, 2003	Art Unit: 2193						
		OTHER ART - NO PATI	ENT LITERATURE DOCUM	MENTS						
Examiner Initials*	Cite No <sup>1</sup>		mposium, catalog, etc.), date, p ity and/or country where publi	age(s), volume-issue number(s), ation <sup>6</sup>						
1		AVARO, Olivier, et al., MPEG-4 Si woody.imag.fr/MPEG4/syssite/sysp								
<del></del>		BIERLING, M., Displacement Estin	nation by Hierarchical Block	kmatching, SPIE, Vol. 1001,						
		Visual Communications and Image CHAN, Y.L and W.C. Siu, Adaptive								
		Matching Algorithm, IEE Electronic 1639.	es Letters, Vol. 31, No. 19, S	ept. 14, 1995, pp. 1637-						
		CHAN, Yui-Lam and Wan-Chi Siu, Vector Estimation, IEEE Transactio No. 1, Feb. 1996, pp. 113-118.	ns on Circuits and Systems o	on Video Technology, Vol. 6,						
		CHEN, Liang-Gee, Wai-Ting Chen, Yeu-Shen Jehng Tzi-Dar Chuieh, An Efficient Parallel Motion Estimation Algorithm for Digital Image Processing, IEEE Transactions on Circuits and Systems on Video Technology, Vol. 1, No. 4, Dec. 1991, pp. 378-384.  CHENG, K.W., S.C. Chan, Fast Block Matching Algorithms for Motion Estimation, ICASSP96, 1996, pp. 2318ff.								
		CORBAL, Jesus, et al., DLP+TLP Processors for the Next Generation of Media Workloads, 0-7695-1019-1/01, IEEE, 2001, pp. 219-228.								
		DAY, Neil, Ed., Introduction to MPEG-7 (v.3.0), International Organization for Standardization, ISO/IEC JTC1/SC29/WG11, Coding of Moving Pictures and Audio, #N4032, March 2001, pp. 1-10.								
		DUFAUX, Frederic, et al., Efficient, Coding, 1057-7149/00, IEEE, 2000,	Robust, and Fast Global Mapp. 497-501.	otion Estimation for Video						
		ECKART, Stefan, Chad Fogg, ISO/I Digital Video Compression: Algorith	nms and Technologies, 1995	, San Jose, CA., 15 prays						
		EDIRISINGHE, E.A., et al., <i>Shape A</i> 2000, pp. 514-520.								
	<u></u>	FENG, J., Lo, K. T. Mehrpour, H. K Estimation Algorithm for Video Code 1542-1543.	ing, IEE Electronics Letters,	Vol. 31, No. 18, 1995, pp.						
		FURHT, Botho, Joshua Greenberg, I Video Compression, Kluwer Academ								
Examiner Signature				Date Considered						

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

'Unique citation designation number. 'See attached Kinds of U.S. Patent Documents. 'Enter Office that issued the document, by the two-letter code (WIPO Standard S.3). 'For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. 'Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 'Applicant is to place a check mark here if English language Translation is attached.

Substitute for Form 1449A/PTO (Modified) (use as many sheets as necessary)			Attorney Docket No.: 42915771		Application Number: 10/149, 738				
Page			First Named Inventor:  Eric Oches		Examiner: Malzahn, David H.				
Confirma	ition	No	Filing Date: December 30, 2003	Art Unit: 2193					
		OTHER ART - NO PAT	ENT LITERATURE DOCUM	IENTS					
Examiner Initials*	Cite ·No¹								
		GHANBARI, M., The Cross-Searce Communications, Vol. 38, No.7, Ju	_	nation, IEEE Transac	ctions on				
		<del>-</del>	HE, Zhongli, M.L. Liou, A High Performance Fast Search Algorithm for Block Matching Motion Estimation, IEEE Transactions on Circuits and Systems on Video Technology, Vol.						
		Consideration, IEEE Transactions of No.5, Oct. 1997, pp. 819-823.	HE, Zhong-Li, M.L. Liou, Design of Fast Motion Estimation Algorithm based on Hardware Consideration, IEEE Transactions on Circuits and Systems on Video Technology, Vol.7, No.5, Oct. 1997, pp. 819-823.						
		HEISING, G., et al., MoMuSys: MF AC098/HHI/WP5.1/DS/P/049/B1,		ence Software Packa	ge,				
		INTEL CORPORATION, Block-M SIMD Extensions 2 (SSE2), Vers. 2	.0 9/22/00, Order No. 248605	5-001, pp. 1-13, A-1,	A-2.				
·		INTERNATIONAL ORGANISAT Version 2.0, ISO/IEC JTC1/SC29/V October 2000, 12 pp.		•	- 1	_			
		INTERNATIONAL ORGANISAT Under Consideration, ISO/IEC JTC #N3932, January 2001, pp. 1-35.			- 1				
		JAIN, J., A. Jain, Displacement Med Coding, IEEE Transactions on Com	munications, Vol. 29, No. 12	2, Dec. 1981, pp. 179	9-1808.				
		JU, John CH., et al., A Fast Rate-Ovideo Coding, 1051-8215/99, IEEE		Algorithm for Low-	Bit-Rate				
		JUNG, Hae Mook, Duch Dong Hwang Coong Soo Park, Han Soo Kim, An Annular Search Algorithm for Efficient Motion Estimation, International Picture Coding Symposium, PCS9 1996, pp. 171-174.							
		KAPPAGANTULA, S., K.R. Rao, A Transactions on Communications, 3			n, IEEE	-			
Examiner Signature				Date Considered	•				

'Unique citation designation number. 'See attached Kinds of U.S. Patent Documents. 'Enter Office that issued the document, by the two-letter code (WIPO Standard S.3). 'For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. 'Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 'Applicant is to place a check mark here if English language Translation is attached.

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute (us	for For	rm 1449A/PTO (Modified) v sheets as necessary)	Attorney Docket No.:	101749,7						
Page			First Named Inventor:	Examiner: Malzahn, [	David H.					
Confirma	ation N	Jo	Filing Date: December 30, 2003	Art Unit: (						
		OTHER ART - NO PATI	ENT LITERATURE DOCUM							
Examiner Initials*	Cite No¹	Include name of the author (in CAPIT/ item (book, magazine, journal, serial, sy publisher, c	AL LETTERS), title of the article ymposium, catalog, etc.), date, pcity and/or country where public	page(s), volume-issue n	title of the number(s),	Transl ation <sup>6</sup>				
		Integral Projections, IEEE Journal of 1992, pp. 968-971.	KIM, Joon-Seek, Rae-Hong Park, A Fast Feature-Based Block Matching Algorithm Using Integral Projections, IEEE Journal on Selected areas in communications, Vol.10, No.5, June 1992, pp. 968-971.							
		ISO/IEC JTC1/SC29/WG11, Coding 1-19.	KIM, Michelle, Ed., MPEG-4 Systems, International Organization for Standardization, ISO/IEC JTC1/SC29/WG11, Coding of Moving Pictures and Audio, #N3383, June 2000, pp. 1-19.							
		KNEIP, Johannes, et al., Applying a 0272-1732/99, IEEE, 1999, pp. 64-7	74.							
		KNEIP, J. (Johannes), et al., The MPE Workshop on Signal Processing Sys	_	· ·						
		KOGA, J., et al., Motion Compensation Proceedings of the National Telecon	nted Interframe Coding for Vi mmunications Conference, 19	ideo Conferencing, 981, pp. G5.3.1-5.3	3.3.					
		KOENEN, Rob, Ed., Overview of the Standardization, ISO/IEC JTC1/SC2 #N4030, March 2001, pp. 1-69.	he MPEG-4 Standard, Interna 29/WG11, Coding of Moving	ational Organization g Pictures and Audio	n for o,					
		KUHN, P., Algorithms, Complexity Estimation, 1999 Kluwer Academic 119-121, 147-167, and 189-204.	Publishers, Boston, pp. cove	er-vi, 15, 17-59, 107	7-109,	!				
		KUHN, P., Stechele W., Complexity for VLSI Implementation, vol. SPIE San Jose, Jan. 1998, pp. 498-509.	3309 Visual Communication	ns and Image Proces						
		LEE, Liang-Wei, Jhing-Fa Wang, Ja Search-Window Adjustment and Inte Transactions on circuits and systems 87.	erlaced Search Block-Matchi	ing Algorithm, IEEE 3, No. 1, Feb. 1993,						
Examiner Signature				Date Considered						

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

'Unique citation designation number. <sup>3</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard S.3). <sup>4</sup>For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. <sup>3</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>4</sup>Applicant is to place a check mark here if English language Translation is attached.

Substitute for Form 1449A/PTO (Modified) (use as many sheets as professary)			Attorney Docket No.:	Application Number: 10/749, 738					
Page 4	•	1	First Named Inventor:  Evic Ocols	Examiner: Malzahn, David	H.				
Confirma	tion N	lo.	Filing Date: December 30, 2003	Art Unit: 2193					
		OTHER ART – NO PATE	ENT LITERATURE DOCUM	ENTS					
Examiner Initials*	Cite No¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published							
		LEE, W., Y. Kim, R.J. Gove, C.J. R IEEE Multimedia, Vol. 1, No. 4, 19		egrating Video and Audio,					
		LEE, Xiaobing, Ya-Qin Zhang, A For Coding Using Block-Feature Match Technology, Vol. 6, No. 6, Dec. 199	ast Hierarchical Motion-Coming, IEEE Transactions on Ci	<del>-</del>					
LENGWEHASATIT, Krisda, et al., A Novel Computationally Scalable Algorithm for Motion Estimation, SPIE 3309 VCIP Visual Communications and Image processing, San Jose, CA, Jan. 1998, pp. 66-79.									
LI, R., B. Zeng, M.L. Liu, A New Three-Step Search Algorithm for Block Motion Estimates IEEE Transactions on Circuits and Systems on Video Technology, Vol. 4, No. 4, Aug. 1 pp. 438-442.									
		LI, W., E. Salari, Successive Elimination Algorithm for Motion Estimation, IEEE Trans. Image Processing, Vol. 4, Jan. 1995, pp. 105-107.							
·		LIANG, Jie, et al., Region-Based Video Coding with Embedded Zero-Trees, 1068-0314/97, IEEE, 1997, p. 449.							
_		LIU, B., A. Zaccarin, New Fast Algorithms for the Estimation of Block Motion Vectors, IEEE Transactions on Circuits and Systems on Video Technology, Vol.3, No.2, April 1993, pp. 148-157.							
		LIU, Lurng-Kuo, Ephraim Feig, A Block-Based Gradient Descent Search Algorithm for Block-Based Motion Estimation in Video Coding, IEEE Transactions on Circuits and Systems on Video Technology, Vol. 6, No. 4, Aug. 1996, pp. 419-422.							
		MO, Hyeon-Cheol, et al., A High-Speed Pattern Decoder in MPEG-4 Padding Block Hardware Accelerator, 0-7803-6685-9/01, IEEE, 2001, pp. II-197 – II-200.							
		MOSCHETTI, F., et al., About Mac Proc. of 2001 IEEE Int'l. Conf. on N 2001, 4 pp.	roblock Subsampling for Mot Multimedia and Expo ((ICME	tion Estimation on IA-64, 2001), Tokyo, Japan, August					
		MOSCHETTI, F., et al., A Fast Block IEEE #0-7803-5482-6/99, pp. IV-32		ssors Using Subsampling,					
		NAM, Kwon Moon, Joon-Seek Kim Motion Vector Estimation Algorithm Systems on Video Technology, Vol.	n, Rae-Hong Park, Young Ser In Using Mean Pyramid, IEEE	Transactions on Circuits and					
Examiner Signature		ference considered, whether or not citation is in		Date Considered					

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>2</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard S.3). <sup>4</sup>For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. <sup>4</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>4</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual

case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for Form 1449A/PTO (Modified) (use as many sheets as necessar 0)		sheets as necessary	ttomey Docket No.: 12 P15771	Application Number: \0/749, 738				
Page			First Named Inventor: Examiner:  Eric Debes Malzahn, David H.					
Confirm	Confirmation No		ling Date: Ecom Vour, 30,2003	Art Unit: 2193				
_		OTHER ART - NO PATENT	LITERATURE DOCUME	NTS	,			
Examiner Initials*	Cite No¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published						
NETRAVALI, A., B. Haskell, Digital Pictures Representation and Compression, New York, Plenum, 1988, pp. cover-xv, 334-340, 537-542, and 354-355.								
. ,		PIRSCH, Peter, Nicolas Demassieux, V Compression - A Survey, Proceedings o	f the IEEE, Vol. 83, No. 2,	Feb. 1995, pp. 220-246.				
		PO, Lai-Man, Wing-Chung Ma. A Nove Blockmatching, IEEE Transactions on O No. 3, Jun. 1996, pp. 313-317.						
		PURI, A., H.M. Hang, D.L. Schilling, A. Compensated Coding, Proc. IEEE ICAS	SSP, 1987, pp. 2.4.1-25.4.4	•				
		RAGSDALE, Gary L., et al, Relationsh Perceived Quality for Digital Video Over Technical Information Bulletin 99-2, Ja	er ATM, National Commun	on Characteristics to ications System,				
		RAMKISHOR, K., et al., Real Time Imparation ARM7TDMI, Proc. of 2001 Int'l. Sympostrocessing, May 2-4, 2001, pp. 522-526	osium on Intelligent Multin					
		SHI, Y.Q., X. Xia, A Thresholding Muli Transactions on Circuits and Systems of 437-440.	•	, ,				
		SIKORA, Thomas, MPEG Digital Vide						

SIKORA, Thomas, MPEG-1 and MPEG-2 Digital Video Coding Standards, Preprint from

Date Considered

Digital Consumer Electronics Handbook, 1<sup>st</sup> Ed., McGraw-Hill Book Co., pp. 1-43. SIKORA, Thomas, *The Structure of the MPEG-4 Video Coding Algorithm*, Preprint from Digital Consumer Electronics Handbook, 1<sup>st</sup> Ed., McGraw-Hill Book Co., pp. 1-16.

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Examiner Signature

'Unique citation designation number. 'See attached Kinds of U.S. Patent Documents. 'Enter Office that issued the document, by the two-letter code (WIPO Standard S.3). 'For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. 'Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 'Applicant is to place a check mark here if English language Translation is attached.

Substitute for Form 1449A/PTO (Modified) (use as many sheets as necessary)			Attorney Docket No.: 42P15771	Application Number: 101749, 738	· · · · · · · · · · · · · · · · · · ·				
Page 1			First Named Inventor: Evic DeNes		Examiner: Malzahri, David H.				
Confirma	ition N	Jo	Filing Date: December 30,2005	Art Unit: 3					
		OFHER ADD- NO PATE	ENT LITERATURE DOCUM	IENTS	··				
Examiner Initials*	Cite No¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published							
		Partial Distortion Criteria, SPIE 33 1998, San Jose, CA, pp. 88-95.	SONG, Byung Cheol, Jong Beom Ra, A Hierarchical Block Matching Algorithm Using Partial Distortion Criteria, SPIE 3309 VCIP Visual Communications and Image Processing, 1998, San Jose, CA, pp. 88-95.						
		SRINIVASAN, Ram and K.R. Rao, Predictive Coding Based on Efficient Motion  Estimation, IEEE Transactions on Circuits and Systems on Video Technology, Vol. Com-33, No. 8, Aug. 1985, pp. 888-896.							
		STOLBERG, HJ., et al., <i>The M-Pi</i> . 7803-548206/99, IEEE, 2000, pp. II		Its Macroblock Engine, 0-					
		THAM, Jo Yew, et al., Transactions Search Algorithm for Block Motion							
		van der SCHAAR, M., et al., Near-I Algorithm for Cost Reduction in DT	Cossless Complexity-Scalable V Receivers, 0098 3063/00, 1	EEE, 2000, pp. 923-933.					
		WANG, Chung-Neng, et al., Improv Transform Coding, 0-7803-6685-9/0	1, IEEE, 2001, pp. V-227 –	V-230.					
		WESTERINK, P. H., et al., Two-Past Develop, Vol. 43, No. 4, July 1999,		te Encoding, IBM J. Res.					
		WITTENBURG, J.P., et al., HiPAR- Image Processing Applications, (0-7		•					
		XU, Jie-Bin, Lai-man Po, and Chok- Algorithm for Fast Block Motion Est Santa Barbara, 1997. PP 610 - 61	Kwan Cheung, A New Predition, IEEE Int. Conf. Im. 3.	iction Model Search age Processing, ICIP97,					
		YU, Fengqi and Alan N. Willson, Jr. Motion Estimation, ICASSP97, 1997		nted Fast Algorithm for					
		ZHU, Shan, Kai-Kuang Ma, A New I IEEE Transactions on Circuits and S pp. 287-290.	Diamond Search Algorithm j		:				
Examiner Signature				Date Considered					

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>2</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard S.3). <sup>4</sup>For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. <sup>4</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>4</sup>Applicant is to place a check mark here if English language Translation is attached.

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

PTC/SB/08a (08-03 )
Approved for use through 07/31/2006, OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

#### **Application Number** December 30,2003 Filing Date INFORMATION DISCLOSURE First Named Inventor STATEMENT BY APPLICANT Art Unit ( Not for submission under 37 CFR 1.99) Malzahn, David H. **Examiner Name** 42P15771 Attorney Docket Number

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Examiner Initial*  Cite No Patent Number  1 5019968  2 5321810			U.S	.PATENTS	Remove		
		Patent Number	Kind Code <sup>1</sup>	issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	
	1	5019968		1991-05-28	Wang, et al.		
	2	5321810		1994-06-14	Case, et al.		
	3	5497497		2008-01-23	Miller, et al.		
	4	6381690		2002-04-30	Lee		
	5	6223277		2001-04-24	Karguth		
f you wish	to ac	ld additional U.S. Pater	nt citatio	n information p	lease click the Add button.	Add	
			U.S.P.	ATENT APPL	CATION PUBLICATIONS	Remove	
Examiner nitial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	
	1	20030084082		2003-05-01	Debes, Eric, et al.		

Application Number	10/749,738
Filing Date	December 30, 2003
First Named Inventor	Eric Debes
Art Unit	2193
Examiner Name	Malzahn, David H.
Attorney Docket Numb	

	2	20020112147	20	002-08-15	Chennupaty, Srinivas; et al.						
If you wis	h to a	dd additional U.S. Publ	ished Appli	cation citation	n information <sub>l</sub>	please click the Add	d buttor	n. Add			
			FC	OREIGN PAT	ENT DOCUM	IENTS		Remove			
Examiner Initial*	Cite No	Foreign Document Country Kind Code <sup>2</sup> j Code <sup>4</sup>		Publication Date	Publication Date   Name of Patentee or Applicant of cited   Passing Patentee or Passing Patentee or Passing Passing Patentee or Passing Passing Passing Patentee or Patentee or Passing Passing Patentee or Patent		where Rel	or Relevant	T5		
	1			.•	·						
If you wis	h to a	dd additional Foreign P	atent Docu	ment citation	information p	lease click the Add	button	Add		<del></del>	
			NON-P	ATENT LITE	RATURE DO	CUMENTS		Remove			
Examiner Initials*	Cite No	Include name of the at (book, magazine, journ publisher, city and/or of	nal, serial,	symposium,	catalog, etc), o					Т5	
	1	PHILIPS ELECTRONICS, "TriMedia TM1000 Preliminary Data Book," 1997, 10 pgs									
	2	"MIPS Digital Media Extension," Set Architecture Specification, Web Site - mips.com/MDMXspec.ps, October 21, 1997. 8 pgs									
,	3	HEWLET PACKARD, "64-bit and Multimedia Extensions in the PA-RISC 2.0 Architecture," Microprocessors Precision Architecture, 1997, 18 pgs									
	4	KAWAKAMI, Y., ET AL., Solid-State Circuits Confe	"A Single-Cl erence, pp. 4	hip Digital Sign	nal Processor fo	or Voiceband Applica	tions,"IE	EE, 1980 I	nternational		
	5	SUN MICROSYSTEMS, INC., "UltraSPARC Multimedia Capabilities On-Chip Support for Real-Time Video and Advanced Graphics," SPARC Technology Business, September 1994, 8 pgs									

Application Number		10/749,738
Filing Date		December 30, 2003
First Named Inventor	Evi	
Art Unit		2193
Examiner Name	Ma	Izahn, David H.
Attorney Docket Numb	er	42P15771

	6	CASE, B., "Philips Hopes to Displace DSPs with VLIW, TriMedia Processors Aimed at Future Multimedia Embedded Apps," Microprocessor Report, December 1994, pp. 12-18	
,	7	Gwennap, L., "New PA-RISC Processor Decodes MPEG Video, H"'s PA-7100LC Uses New Instructions to Eliminate Decoder Chip," Microprocessor Report, January, 1994, pp. 16-17	
	8	TEXAS INSTRUMENTS, "TMS320C2X User's Guide," 1993, pp 3:2-3:11; 3:28-3:34; 4:1-4:22; 4:41; 4:103; 4:119- J;120; 4:122; 4:150-4:151	
	9	INTEL CORPORATION, "i860 TM Microprocessor Family Programmer's Reference Manual," 1992, Chapters 1, 3, 8 and 11	
	10	LEE, R. B., "Accelerating Multimedia with Enhanced Microprocessors," IEEE Micro, April 1995, pp. 22-32	
	11	INTEL CORPORATION, "Pentium Processor's User's Manual, vol. 3; Architecture and Programming Manual," 1993, Chapters 1, 3, 4, 6, 8, and 18	
,	12	MARGULIS, N., "i860 Microprocessor Architecture," McGraw Hill, Inc., 1990, Chapters 6, 7, 8, 10, and 11	
	13	INTEL CORPORATION, "Intel i750, i860 TM, i960 Processors and Related Products, 1993, pp. 1-3	
	14	MOTOROLA, INC., "Motorola MC88110 Second Generation RISC Microprocessor User's Manual," 1991 ၂၈၀၀ ၉၀၅၀.	
	15	MOTOROLA, INC., "Errata to MC88110 Second Generation RISC Microprocessor User's Manual," 1992, pp. 1-11	
	16	MOTOROLA, INC., "MC88110 Programmer's Reference Guide, 1992, pp. 1-4	

Application Number	10/749 738
Filing Date	Darrher 30, 2003
First Named Inventor	Eric Debes
Art Unit	2193
Examiner Name	Malzahn, David H.
Attorney Docket Numb	

	17	SHIPNES, J., "Graphics Processing with the 88110 RISC Microprocessor," Motorola, Inc. IEEE, No. 0-8186-26455-0/92, 1992, pp. 169-174										
	18	ADVANCED MICRO DEVICES, INC., "AMD-3D Technology Manual," February 1998, pp. 1-58										
·	19	HAN	HANSEN, C., "Architecture of a Broadband Mediaprocessor," Proceeedings of Compcon, IEEE, 1996, pp. 334-340									
	20	LEVINTHAL, ET AL., "ChapA SIMD Graphics Processor," Computer Graphics Project, ACM, vol. 18, No. 3, July 1984, pp. 77-81										
i /	21		LEVINTHAL, ET AL., "Parallel Computers for Graphics Applications," Proceedings: Second International Conference on Architectural Support for Programming Languages and Operating Systems, (ASPLOS II), IEEE, 1987, pp. 193-198									
	22	WANG, ET AL., "A Processor Architecture for 3D Graphics Calculations," Computer Motion, Inc., Goleta, CA, 23 pgs										
If you wis	h to a	dd add	ditional non-patent literature document citation information p	please click the Add button	Add							
			EXAMINER SIGNATURE									
Examiner	Signa	iture		Date Considered								
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.												
Standard ST  4 Kind of doc	<sup>1</sup> See Kind Codes of USPTO Patent Documents at <u>www.USPTO.GOV</u> or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.											

PTO/SB/08a (08-03)

Approved for use through 07/31/2006, OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

	Application Number	10749,738
INFORMATION DISCLOSURE	Filing Date	December 30, 2003
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	First Named Inventor &	ric Debes
( Not for submission under 37 CFR 1.99)	Art Unit	2193
	Examiner Name M	alzahn, David H.
	Attorney Docket Number	42 195771

				U.S.	PATENTS	Remove			
Examiner Initial*	Examiner Cite nitial* Patent Number Kin		Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear			
	1	3711692		1973-01-16	BATCHER				
	2	3723715		1973-03-27	CHEN et al.				
	3	4139899		1979-02-13	TULPULE et al.				
	4	4161784		1979-07-17	CUSHING et al				
·	5	4393468		1983-07-12	NEW "				
	6	4418383		1983-11-29	DOYLE et al.				
	7	4490786		1984-12-25	NAKATANI				
	8	4498177		1985-02-05	LARSON				

Application Number	10/749 738
Filing Date	December 30,2003
First Named Inventor	Eric Debes
Art Unit	2193
Examiner Name	Malzahn, David H.
Attorney Docket Numb	er 42P15771

	<del></del>	T	т — т			
	9	4707800	1	1987-11-17 	MONTRONE et al.	
:0	10	4771379	1	988-09-13	ANDO et al.	
	11	4903228	1	990-02-20	GREGOIRE et al.	
	12	4989168	1	991-01-29	KURODA et al.	
	13	5081698	1	992-01-14	KOHN	·
	14	5095457	1!	992-03-10	JEONG	
	15	5168571	11	992-12-01	HOOVER et al.	
	16	5187679	19	993-02-16	VASSILIADIS et al.	· .
	17	5268995	19	993-12-07	DIEFENDORFF et al.	
	18	5390135	19	995-02-14	LEE et al.	
	19	5408670	19	995-04-18	DAVIES	

Application Number	101749.738
Filing Date	December 30, 2003
First Named Inventor	Eric Debes
Art Unit	2193
Examiner Name	Malzahn, David H.
Attorney Docket Number	42015771

		<del></del>	<del></del>		<del></del>
	20	5423010	1995-06-06	MIZUKAMI	
	21	5426783	1995-06-20	NORRIE et al.	
	22	5465374	1995-11-07	DINKJIAN et al.	
	23	5487159	1996-01-23	BYERS et al.	
	24	5524256	1996-06-04	TURKOWSKI	
	25	5579253	1996-11-26	LEE et al.	
	26	5594437	1997-01-14	O'MALLEY	
	27	5625374	1997-04-29	TURKOWSKI	
,	28	5680161	1997-10-21	LEHMAN et al.	
,	29	5781457	1998-07-14	COHEN et al.	
·	30	5819117	1998-10-06	HANSEN	

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99) Application Number | 10,749,738 | | Filing Date | (Xicm ber 30, 2003) | | First Named Inventor | 2ric Octocs | | Art Unit | 2193 | | Examiner Name | (Mal Zahn, Mavid H. Attorney Docket Number | 42 P 15 771)

				,		 	 
	31	5822619		1998-10-13	SIDWELL		 
	32	5838984		1998-11-17	NGUYEN et al.		
	33	5909572		1999-06-01	THAYER et al.		
	34	5933650		1999-08-03	van HOOK et al.		
	35	6041404		2000-03-21	ROUSSEL et al.		
	36	6115812		2000-09-05	ABDALLAH et al.		
	.´ 37	6192467		2001-02-20	ABDALLAH et al.		
ď	38	6288723		2001-09-11	HUFF et al.		
	39	6484255		2002-11-19	DULONG		
	40	6546480		2003-04-08	MANDAVILLI et al.		
If you wish	to ad	ld additional U.S. Patent	citation	n information pl	ease click the Add button.	Add	
			U.S.P	ATENT APPLIC	CATION PUBLICATIONS	Remove	